



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,521	06/30/2000	Raju C. Bopardikar	CO012/7000	1111
81369 7590 11/27/2009 LAW OFFICES OF PAUL E. KUDIRKA 40 BROAD STREET SUITE 300 BOSTON, MA 02109				
EXAMINER MIRZA, ADNAN M				
ART UNIT 2445		PAPER NUMBER		
NOTIFICATION DATE 11/27/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PKUDIRKA@PAULKUDIRKA.COM  
jmellen@paulkudirka.com

### Office Action Summary

**Application No.**

09/608,521

**Applicant(s)**

BOPARDIKAR ET AL.

**Examiner**

ADNAN MIRZA

**Art Unit**

2445

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 and 44-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 44-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/02)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

1. In view of the Appeal filed on 09/12/2008, PROSECUTION IS HEREBY REOPENED. As set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Vivek Srivastava/

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11,44-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blumenau (6,195,703) and further in view of Muller et al (U.S. 5,909,686).

As per claims 1,44 Blumenau disclosed apparatus for providing high-performance, scaleable data processing and storage services to a client from a plurality of resources, comprising an access interface module which receives data storage requests, each including a data identifier (col. 12, lines 26-33), and data to be stored from the client and in response to each service request and based on a workload instead of a physical location of each of the plurality of devices dynamically selects a subset of the plurality of storage devices in which the data is transferred to be stored and so that the physical storage device location to which data corresponding to the same data identifier is transferred can change from request to request in order to dynamically distribute the workload across the plurality of device (col. 2, lines 5-21); One ordinary skill in the art at the time of the invention knows that "routing information based on the loading characteristic of the storage access request received at the switch inputs in order to balance loading of the storage access requests upon the outputs of the switch" is prime example of load balancing, Where the routing information is based on the loading characteristic of the meaning workload of the memory.

However Blumenau fails to disclose a switch fabric for temporarily connecting the access interface module to the selected subset of the plurality of storage devices so that the data can be transferred to the selected subset of storage devices.

In the same field of endeavor Muller discloses, The switch fabric includes a memory access interface configured to arbitrate accesses to a forwarding database memory. The switch fabric also includes a search engine couple to the memory access interface and to engine coupled to the memory access interface and multiple input ports. The switch fabric includes command execution logic that is configured to interface with the processor for performing forwarding database accesses requested by the processor (col. 2, lines 18-28).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated The switch fabric includes a memory access interface configured to arbitrate accesses to a forwarding database memory. The switch fabric also includes a search engine couple to the memory access interface and to engine coupled to the memory access interface and multiple input ports. The switch fabric includes command execution logic that is configured to interface with the processor for performing forwarding database accesses requested by the processor as taught by Muller in the method and system of Blumenau to make use of the switch fabric's knowledge of the low-level instructions for accessing the forwarding database.

5. As per claims 2,45 Blumenau -Muller disclosed wherein the access interface module selects the subset of the plurality of resources based on the relative demand placed on the subset of resources (col. 1, lines 49-63).

6. As per claims 3,46 Blumenau -Muller disclosed wherein the switch fabric comprises a control switch fabric for transferring control information and a separate data switch fabric for transferring data (Blumenau, col. 2, lines 7-19).
7. As per claims 4,47 Blumenau -Muller disclosed wherein the control switch fabric is optimized for transferring control information and the data switch fabric is optimized for transferring data (Blumenau, col. 2, lines 29-41).
8. As per claims 5,48 Blumenau -Muller disclosed wherein the request for service includes control information and data and wherein the access interface module separates the control information and the data and transfers the data to the selected subset of resources over the data switch fabric (Blumenau, col. 6, lines 44-53).
9. As per claims 6,49 Blumenau -Muller disclosed wherein the data switch fabric comprises a none blocking crossbar switch for data transfer and the control switch fabric comprises an Ethernet switch for control information transfer (Muller, col. 4, lines 1-23).
10. As per claims 7,50 Blumenau -Muller disclosed further comprising a resource module connected to the plurality of resources for generating pre-allocation information

that pre-allocates services from the plurality of resources in order to evenly distribute a workload 4 across the plurality of resources (Blumenau, col. 2, lines 5-21).

11. As per claims 8,51 Blumenau -Muller disclosed wherein the switch fabric connects the access interface module to the resource module so that the resource module can transfer the pre-allocation information to the access interface module (Muller, col. 4, lines 44-57).

12. As per claims 9,52 Blumenau -Muller disclosed wherein the access interface module selects a subset of the plurality of resources based on the pre-allocation information (Blumenau, col. 2, lines 5-21).

13. As per claims 10,53 Blumenau -Muller disclosed wherein the access interface module comprises a data memory which temporarily stores information transferred between the access interface module and the selected subset of the plurality of resources (Blumenau, col. 5, lines 49-57).

14. As per claims 11,54 Blumenau -Muller disclosed further comprising a plurality of access interface modules each access interface module receiving service requests from a plurality of clients (Muller, col. 5, lines 6-19).

***Response to Arguments***

15. Applicant's arguments with respect to claim 1-11, 44-54 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.

17. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)-272-7304. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



Art Unit: 2445

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).

/Adnan M Mirza/  
Examiner, Art Unit 2445